

Abstract of the Invention

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An apparatus and method for the application of perceptual processing techniques to the speech Fourier spectrum to achieve a *perceptual spectrum* that is based upon human auditory perception embodied in a perceptual speech processor comprising a noise masker utilizing a masking winner-take-all circuit, a magnitude renormalizer for

10 translating objective signal magnitude to a subjective loudness minimum audible field, and a mel-scale frequency adjuster for adjusting the physical Hertz frequency of a signal to the perceptual mel-scale frequency.

